

### **Abstract of the Disclosure**

An integrated circuit with a number of optical fibers that are formed in high aspect ratio holes. The high aspect ratio holes extend through a semiconductor wafer. The optical fibers include a cladding layer and a core formed in the high aspect ratio  
5 hole. These optical fibers are used to transmit signals between functional circuits on the semiconductor wafer and functional circuits on the back of the wafer or beneath the wafer.

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